

IN THE CLAIMS:

1-25 (Canceled)

26. (Currently Amended): An apparatus comprising:

a housing;

an opening in the housing configured to pass a substrate into the housing;

a chuck located within the housing, wherein the chuck is configured to hold the substrate for processing and wherein the substrate may be spun using the chuck;

an inlet within the housing, wherein the inlet is configured for connection to a source for a precursor silica solution and wherein the inlet is configured to deposit the precursor ~~precursor~~ silica solution onto the substrate held by the chuck and wherein a film of the precursor solution may be formed on the substrate; and

a ~~filter-unit~~ vapor dispense head, wherein the ~~filter-unit~~ vapor dispense head is configured to receive a catalyst and introduce the catalyst onto the wafer in a uniform manner such that the catalyst becomes homogeneously diffused into the film and forms pores in the film, and

wherein the ~~filter-unit includes a vapor dispense head that dispenses the catalyst and a vapor distribution unit that uniformly distributes the catalyst~~ is configured to receive a gas mixture and introduce the gas mixture into the housing during a drying phase to maintain capillary pressure within the pores formed in the film.

27. (Original): The apparatus of claim 26, wherein the substrate is a semiconductor wafer.

28. (Original): The apparatus of claim 26, wherein the substrate is a substrate for an integrated circuit.

29. (Original): The apparatus of claim 26, wherein the substrate is a substrate for a chemical sensor.

30. (Currently Amended): The apparatus of claim ~~26~~ 32, wherein the vapor distribution unit is a mesh unit.

31. (Previously Added): The apparatus of claim 30, wherein the mesh unit is made of a polytetrafluoroethylene material.

32. (New): The apparatus of claim 26, further comprising:
a vapor distribution unit that uniformly distributes the catalyst.

33. (New): The apparatus of claim 26, wherein the gas mixture is a mixture of a carrier gas and a vapor.

34. (New): The apparatus of claim 33, wherein the carrier gas is nitrogen.

35. (New): The apparatus of claim 33, wherein the vapor is water vapor.

36. (New): The apparatus of claim 33, wherein a carrier gas to vapor ratio is increased from a first ratio during deposition and spinning to a second ratio during drying.

37. (New): The apparatus of claim 26, wherein the gas mixture is introduced into the housing at a first pressure and reduced to an ambient pressure during the drying phase.
